

Indiana Department of Environmental Management

We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan Governor

Lori F. Kaplan Commissioner

September 25, 2003

100 North Senate Avenue P.O. Box 6015 Indianapolis, Indiana 46206-6015 (317) 232-8603 (800) 451-6027 www.in.gov/idem

TO: Interested Parties / Applicant

RE: Richmond Power and Light / SSM 177-12751-00009

FROM: Paul Dubenetzky

Chief, Permits Branch Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, within eighteen (18) calendar days of the mailing of this notice. The filing of a petition for administrative review is complete on the earliest of the following dates that apply

- the date the document is delivered to the Office of Environmental Adjudication (OEA); (1)
- (2)the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- The date on which the document is deposited with a private carrier, as shown by receipt issued by (3)the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- the name and address of the person making the request: (1)
- (2)the interest of the person making the request;
- identification of any persons represented by the person making the request; (3)
- the reasons, with particularity, for the request: (4)
- the issues, with particularity, proposed for considerations at any hearing; and (5)
- identification of the terms and conditions which, in the judgment of the person making the request, (6) would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

> Enclosures FNPER-MOD.dot 9/16/03



PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

Richmond Power and Light 2000 U.S. 27 South Richmond, Indiana 47374

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 177-12751-00009

Issued by: Original signed by Paul Dubenetzky
Paul Dubenetzky, Branch Chief
Office of Air Quality

Issuance Date: September 25, 2003

Permit Reviewer: Laura M. Groom

Significant Source Modification No.: 177-12751-00009

Page 2 of 20

TABLE OF CONTENTS

Α	SOL	JRCE	SUM	лм д	RY

- A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
- A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

B GENERAL CONSTRUCTION CONDITIONS

- B.1 Definitions [326 IAC 2-7-1]
- B.2 Effective Date of the Permit [IC13-15-5-3]
- B.3 Significant Source Modification [326 IAC 2-7-10.5(h)]

C GENERAL OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
- C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]
- C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]
- C.4 Opacity [326 IAC 5-1]
- C.5 Fugitive Dust Emissions [326 IAC 6-4]

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]

C.7 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

- C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
- C.9 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
- C.10 Monitoring Methods [326 IAC 3]

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

- C.11 Compliance Response Plan Preparation, Implementation, Records and Reports [326 IAC 2-7-5] [326 IAC 2-7-6] [326 IAC 1-6]
- C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
- C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

D.1 FACILITY OPERATION CONDITIONS - LIFAC

Emission Limitations and Standards

- D.1.1 Boiler Limitations
- D.1.2 Opacity Exemption

Compliance Determination Requirements [326 IAC 2-7-6]

- D.1.3 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]
- D.1.4 Pollution Control Project Exclusion [40 CFR 52.21][326 IAC 2-2-1(o)(2)(H)]
- D.1.5 Continuous Emissions Monitoring [326 IAC 3-5-1(c)(2)(B)(i)]

Record Keeping and Reporting Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.6 Reporting Requirements

Richmond Power and Light
Page 3 of 20
Richmond, Indiana
Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

D.2 FACILITY OPERATION CONDITIONS - Limestone Storage and Handling

Emission Limitations and Standards

- D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]
- D.2.2 Preventive Maintenance Plan [326 IAC 2-7-6(6)]

Compliance Determination Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.2.3 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.2.4 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.2.5 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.2.6 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements

D.2.7 Reporting Requirements

Richmond Power and Light Richmond, Indiana

Permit Reviewer: Laura M. Groom

Page 4 of 20 Significant Source Modification No.: 177-12751-00009

SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary electric generating facility.

Responsible Official: Mr. David Osburn

Source Address: 2000 U.S. 27 South, Richmond, Indiana 47374 Mailing Address: P.O. Box 908, Richmond, Indiana 47375-0908

Phone Number: 765-973-7200

SIC Code: 4911 County Location: Wayne

County Status: Attainment for all criteria pollutants

Source Status: Part 70 Permit Program

Major Source, under PSD Rules;

Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to operate the following emission units and pollution control devices:

- (1) One (1) Limestone Injection into the Furnace with downstream Activation of Calcium (LIFAC) system, installed between 1991-1993, to reduce sulfur dioxide (SO₂) emissions from Unit 2. Controlled boiler emissions are exhausted to the atmosphere through a 325 foot stack shared with Unit 1, with a 141 inch exit diameter. The LIFAC is considered a "Pollution Control Project".
- (2) A limestone storage and handling system, consisting of the following equipment:
 - (a) One (1) storage silo with a storage capacity of 250 tons. The method of handling is pneumatic transport. The maximum throughput is 78,840 tons per year. A bin vent filter/baghouse is used for dust control at the loading point.
 - (b) One (1) storage silo with a storage capacity of 135 tons. The method of handling is pneumatic transport. The maximum throughput is 78,840 tons per year. A bin vent filter/baghouse is used for dust control at the loading point.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as

Richmond Power and Light Richmond, Indiana

Page 5 of 20 Significant Source Modification No.: 177-12751-00009 Permit Reviewer: Laura M. Groom

defined in 326 IAC 2-7-1(3);

It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability). (c)

Richmond Power and Light Page 6 of 20 Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate the LIFAC pursuant to 326 IAC 2-7-10.5(h) when, prior tostart of operation, the following requirements are met:

- (a) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (b) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the LIFAC system was constructed as proposed in the application. The LIFAC may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

- (1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.
- (2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.
- (3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

Richmond Power and Light
Page 7 of 20
Richmond, Indiana
Significant Source Modification No.: 177-12751-00009
Permit Reviewer: Laura M. Groom

SECTION C

GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) upon issuance of this permit, including the following information on each facility:
 - Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management Compliance Branch, Office of Air Quality 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

The PMP and PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMP shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1 (34).

Richmond Power and Light
Page 8 of 20
Richmond, Indiana
Significant Source Modification No.: 177-12751-00009
Permit Reviewer: Laura M. Groom

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.
- (b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management Permits Branch, Office of Air Quality 100 North Senate Avenue, P.O. Box 6015 Indianapolis, Indiana 46206-6015

Any such application should be certified by the A "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2(3) opacity from Richmond Power & Light's Coal Boiler No. 1 and Coal Boiler No. 2 shall not exceed an average of twenty-five percent (25%) in any one (1) six (6) minute averaging period, unless otherwise stated in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-or-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management Compliance Data Section, Office of Air Quality 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written

Permit Reviewer: Laura M. Groom

Page 9 of 20 Significant Source Modification No.: 177-12751-00009

explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.7 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

All monitoring and record keeping requirements shall be implemented upon startup. The permitee shall be responsible for installing any necessary equipment and initializing any required monitoring related to that equipment

C.9 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented in accordance with Section D.
- (b) The Permittee shall install and maintain all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit. Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6].

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.11 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection

Richmond Power and Light Page 10 of 20 Richmond, Indiana Significant Source Modification No.: 177-12751-00009

(e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

Permit Reviewer: Laura M. Groom

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

Richmond Power and Light Page 11 of 20
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C Performance Testing, of this permit exceed the level specified in any condition of this
 permit, the Permittee shall take appropriate response actions. The Permittee shall
 submit a description of these response actions to IDEM, OAQ, within thirty (30) days of
 receipt of the test results. The Permittee shall take appropriate action to minimize
 excess emissions from the affected facility while the response actions are being
 implemented
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the Aresponsible official@as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (b) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the Aresponsible official@as defined by 326 IAC 2-7-1(34).
- (c) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Page 12 of 20 Significant Source Modification No.: 177-12751-00009

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

One (1) Limestone Injection into the Furnace with downstream Activation of Calcium (LIFAC) system, installed between 1991-1993, to reduce sulfur dioxide (SO₂) emissions from Unit 2. Controlled boiler emissions are exhausted to the atmosphere through a 325 foot stack shared with Unit 1, with a 141 inch exit diameter. The LIFAC is considered a "Pollution Control Project".

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.1.1 Boiler Limitations

The intermittent operation or non-operation of the limestone injection system (LIFAC) will not change the limits specified in OP 89-09-94-0206, or those set forth in the Title V Operating Permit upon issuance.

D.1.2 Opacity Exemption [326 IAC 5-1-3]

The opacity provisions set forth in OP#89-09-02-06 are incorporated by reference into this Source Modification. If use of the LIFAC contributes to opacity then it should not be operated during start up or shut down of the unit.

Compliance Determination Requirements [326 IAC 2-7-6]

D.1.3 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

Within six (6) months after the LIFAC begins operating, a compliance stack test for PM shall be conducted utilizing Methods 5 or 17 (40 CFR 60, Appendix A), or other methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing. Testing for PM shall be conducted with LIFAC in operation and with Unit #1 off line.

D.1.4 Pollution Control Project Exclusion [40 CFR 52.21] [326 IAC2-2-1(o)(2)(H)]

Pursuant to 326 IAC 2-1.1-1(13), the operation of the LIFAC is considered a pollution control project, thus is exempted from PSD. Consequently, startup, shutdown, operation and non-operation shall not constitute a modification of Whitewater Valley Station or Unit 2 thereof so long as such intermittent operation or cessation of operation will not result in violation of any requirement of the state implementation plan or any requirement necessary to attain and maintain any national ambient air quality standard.

D.1.5 Continuous Emissions Monitoring [326 IAC 3-5-1(c)(2)(B)(i)]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), a continuous monitoring system shall be calibrated, maintained, and operated for measuring SO_2 during operation of the LIFAC system. Operation of the CEMs meets the performance specifications of 326 IAC 3-5-2.

Record Keeping and Reporting Requirements

D.1.6 Reporting Requirements

To show compliance with D.1.4, SO₂ reductions shall be documented and reported. A quarterly report using the form attached or it's equivalent shall be submitted.

Page 13 of 20 Significant Source Modification No.: 177-12751-00009 Permit Reviewer: Laura M. Groom

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

A limestone storage and handling system, consisting of the following equipment:

- One (1) storage silo with a storage capacity of 250 tons. The method of handling is (a) pneumatic transport. The maximum throughput is 78,840 tons per year. A bin vent filter/baghouse is used for dust control at the loading point.
- One (1) storage silo with a storage capacity of 135 tons. The method of handling is (b) pneumatic transport. The maximum throughput is 78,840 tons per year. A bin vent filter/baghouse is used for dust control at the loading point.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the limestone loading points shall not exceed an amount determined by the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty (60,000) pounds per hour shall be accomplished by use of the equation:

 $E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

 $E = 4.10(17.88)^{0.67}$

E = 17.88 pounds per hour from either transport system

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-6(6)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their emission control devices.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] D.2.3

- Visible emission notations of the limestone storage silos baghouse exhausts shall be performed once per shift during normal daylight operations while loading limestone into either storage silo. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- For processes operated continuously, "normal" means those conditions prevailing, or (c) expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

Richmond Power and Light
Page 14 of 20
Richmond, Indiana
Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

(d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (f) If abnormal emissions are observed at any baghouse exhaust, the Permittee shall take reasonable response steps in accordance with Section C Compliance Response Plan Preparation, Implementation, Records, and Reports. Observation of an abnormal emission is not a deviation from this permit. Failure to take response steps in accordance with Section C Compliance Response Plan Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.4 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the limestone loading process at least once per shift when the loading process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan Preparation, Implementation, Records, and Reports. A normal range shall be determined within the first 500 hours of LIFAC operation or a range established during the latest stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C Compliance Response Plan Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) The instrument used for determining the pressure shall comply with Section C Pressure Gauge and Other Instrument Specifications, and shall be calibrated at least once every six (6) months.

D.2.5 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calender quarter of all bags controlling PM emissions from the limestone storage silo when the limestone is being loaded into the storage silo. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.
- (b) If an abnormal or improper condition is found during an inspection, the Permittee shall take reasonable response steps in accordance with Section C Compliance Response Plan Preparation, Implementation, Records, and Reports. Discovery of an abnormal or improper condition is not a deviation from this permit. Failure to take response steps in accordance with Section C Compliance Response Plan Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.6 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described

Richmond Power and Light Page 15 of 20 Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.7 Record Keeping Requirements

- (a) To document compliance with Condition D.2.3, the Permittee shall maintain records of the visible emission notations of the storage silos' baghouse exhausts.
- (b) To document compliance with Conditions D.2.4 and D.2.5, the Permittee shall maintain the following:
 - (1) Records of the differential pressure readings across the baghouses;
 - (2) Records of the results of the baghouse inspections; and
- (c) All records shall be maintained in accordance with Section C General Record Keeping Requirements, of this permit.

Richmond Power and Light Richmond, Indiana

Permit Reviewer: Laura M. Groom

Page 16 of 20 Significant Source Modification No.: 177-12751-00009

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT **OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION**

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Richmond Power and Light

2000 U.S. 27 South, Richmond, Indiana 47374 Source Address: P.O. Box 908, Richmond, Indiana 47375-0908 T177-12751-00009 Mailing Address:

Part 70 Permit No.: 1177-12751-00009
This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.
Please check what document is being certified:
9 Annual Compliance Certification Letter
9 Test Result (specify)
9 Report (specify)
9 Notification (specify)
9 Affidavit (specify)
9 Other (specify)
I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Date:

Richmond Power and Light Richmond, Indiana Permit Reviewer: Laura M. Groom

Response Steps Taken:

Page 17 of 20 Significant Source Modification No.: 177-12751-00009

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Richmond Power and Light 2000 U.S. 27 South, Richmond, Indiana 47374 Source Address: P.O. Box 908, Richmond, Indiana 47375-09080 Mailing Address: T177-12751-00009 Part 70 Permit No.: Months: _____ to ____ Year: _____ Page 1 of 2 This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period". 9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD. 9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD **Permit Requirement** (specify permit condition #) Date of Deviation: **Duration of Deviation: Number of Deviations: Probable Cause of Deviation:** Response Steps Taken: **Permit Requirement** (specify permit condition #) **Date of Deviation: Duration of Deviation: Probable Cause of Deviation:**

Page 18 of 20 Significant Source Modification No.: 177-12751-00009

Page 2 of 2

		r age z or z
Permit Requirement (specify permit condition #	'	
Date of Deviation:	Duration of Deviation:	
Number of Deviations:		
Probable Cause of Deviation:		
Response Steps Taken:		
Permit Requirement (specify permit condition #	'	
Date of Deviation:	Duration of Deviation:	
Number of Deviations:		
Probable Cause of Deviation:		
Response Steps Taken:		
Permit Requirement (specify permit condition #		
Date of Deviation:	Duration of Deviation:	
Number of Deviations:		
Probable Cause of Deviation:		
Response Steps Taken:		
Form Completed By:		<u> </u>
Title/Position:		_
Date:		_
Phone:		_

Attach a signed certification to complete this report.

Richmond Power and Light Richmond, Indiana Permit Reviewer: Laura M. Groom

Phone:

Page 19 of 20 Significant Source Modification No.: 177-12751-00009

Indiana Department of Environmental Management Office of Air Quality Compliance Data Section

Quarterly SO₂ Reduction Report

		Quarter	iy OO ₂ iteut	action Report
Compan Location Permit N Source:	•	Richmond Pow 2000 U.S. 27 S CP-177-12751- One (1) LIFAC	outh, Richmond, I	IN 47374
			Year:	
				000/ 111 / 115
	Month		ith LIFAC ИМВtu)	SO2/ without LIFAC (lbs/MMBtu)
	Form	Completed By:		
	Title/F	Position:		
	Date:			

Attach a signed certification to complete this report.

Mail to: Permit Administration & Development Section
Office Of Air Management
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Richmond Power and Light P.O. Box 908 Richmond, Indiana 47374

Affidavit of Construction

l,	, being duly swo	orn upon my oath, depose and say:
(Name o	f the Authorized Representative)	
1.	I live in	County, Indiana and being of sound mind and over twenty-one (21) years of
	age, I am competent to give this affidavit.	_ Sounty, indiana and being of sound fining and over twenty one (21) years of
	-ge,p g	
2.	I hold the position of	for .
	I hold the position of(Title)	for (Company Name)
3.	By virtue of my position with	,I have personal
		(Company Name)
	knowledge of the representations contained	in this affidavit and am authorized to make
	these representations on behalf of	
		(Company Name)
4.	I hereby certify that (? Company Name), (co	implete source location), Indiana, (zip code), completed construction of the (?
	operation/facility) on	in conformity with the requirements and intent of the construction permit
	application received by the Office of Air Man	nagement on (? date) and as permitted pursuant to Construction Permit No. CP-
	000-0000, Plant ID No. 000-00000	
	issued on	
5.	Additional (?operations/facilities) were const	tructed/substituted as described in the attachment to this document
and were not made i	in accordance with the construction permit. (De	elete this statement if it does not apply.)
6.	I hereby certify that (? company name) is no	ow subject to the Title V program and will submit a Title V (or FESOP) operating
	permit application within twelve (12) months	from the postmarked submission date of this Affidavit of Construction.
Further Affiant said r	not.	
I affirm under penalt	ies of perjury that the representations contained	d in this affidavit are true, to the best of my information and belief.
		Signature
		Date
STATE OF INDIANA)SS	Λ)	
,	,	
COUNTY OF)	
Subscrib	ed and sworn to me, a notary public in and for	County and State of Indiana on this
day of	, 20	
My Commission exp	ires:	
	-	
		Signature
		Name (typed or printed)
		Name (typed or printed) Section 10: Affidavit.wpd 7/00

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for Significant Source Modification to a Part 70 Source

Source Background and Description

Source Name: Richmond Power and Light

2000 U.S. 27 South, Richmond, Indiana 47374 Source Location:

County: Wayne SIC Code: 4911

Source Modification No.: T177-12751-00009 **Operation Permit No.:** T177-6753-00009 Permit Reviewer: Laura M. Groom

On June 12, 2001, the Office of Air Quality (OAQ) published a notice in the Palladium Item, Richmond, Indiana, stating that Richmond Power and Light had applied for a Significant Source Modification to a not yet issued Part 70 Operating Permit to operate a Limestone Injection Control System into the Furnace with downstream Activation of Calcium (LIFAC). The notice also stated that OAQ proposed to issue a Source Modification for this operation and provided information how the public could review the proposed Source Modification and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Source Modification should be issued as proposed.

On July 6th, 2001, Barnes & Thornburg, submitted comments on the proposed Significant Source Modification to a not yet issued Part 70 Permit. The summary of comments is as follows:

Specific Comments of the Documents

Comment #1: In titles and text throughout the documents, the word "modification" is used to refer to use of LIFAC. The documents should each contain a statement to the effect that. although the term "modification" is used for administrative convenience, IDEM has determined that operation, cessation or suspension of operation, or removal of LIFAC will not constitute a modification within the meaning of the PSD or NSPS programs so long as Unit 2 meets SIP requirements and does not contribute to any violation of the NAAQS. This suggestion is iterated below with respect to each of the three documents accompanying the Public Notice.

Response #1: The operation of the LIFAC is considered a modification pursuant to 326 IAC 2-7-10.5(f)(4). However, because it is considered a pollution control project pursuant to 326 IAC 2-1.1-1(13) the operation of the LIFAC is not a modification under the PSD or NSPS rules as long as Unit 2 meets SIP requirements and does not contribute to any violation of the NAAQS.

> To ensure that the use of the LIFAC does not violate SIP requirements the Source is required in condition D.1.3 to perform a compliance stack test for PM while the LIFAC is in operation. The IDEM has screened the modification and determined there will not be a violation of the NAAQS.

> Physical removal or replacement of the LIFAC will be considered a modification and could be subject to PSD and NSPS rules. This applicability determination will be made at the time of the removal or modification to the facility. The following two (2) paragraphs give rationale that will be used in determining whether or not it is a modification under PSD and NSPS rules.

Richmond Power and Light Page 2 of 14
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

In determining PSD applicability the LIFAC can operate intermittently with the assumption that instead of a five (5) year window for representative baseline emissions, it will be a ten (10) year window. The ten (10) year baseline will be used because that is what has been used in determining past actuals to future actuals as shown in the tsd.

In 40 CFR 60.14(e)(5) the rule contains an exclusion from NSPS provisions for a pollution control project modification, but also states that removal of pollution control equipment will possibly be an exception from the exclusion.

"The following shall not, by themselves, be considered modifications under this part: The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emissions control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial." [40 CFR 60.14(e)(5)]

Initially, when the LIFAC was installed in 1991 it was defined as a "Temporary clean coal technology demonstration project". However, the LIFAC can no longer be defined as temporary. This approval or "modification" is for a permanent modification to Unit 2. Physical removal of the LIFAC will be considered a modification to the source and could subject the unit to NSPS. Pursuant to 326 IAC 2-2-1(II)(1)(2) "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that: (1) is operated for a period of five (5) years or less; and (2) complies with the state implementation plan and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after the project is terminated.

This response applies to all of the following comments submitted by Barnes & Thornburg on behalf of RPL:

Comment #2 (Letter of Transmittal)
Comment #4 (Source Modification)
Comment #11 (Source Modification)

Comment #14 (Technical Support Document)
Comment #15 (Technical Support Document)
Comment #16 (Technical Support Document)

Comment #2: RPL requests that the last paragraph on the first page be replaced with the following:

Since the LIFAC system has been determined to be both a pollution control system and a temporary clean coal technology demonstration project, use, cessation or suspension of use, or removal of LIFAC will not constitute a modification rendering Unit 2 subject to PSD and NSPS, provided that it complies with the SIP and other requirements necessary to attain and maintain the national ambient air quality standards during use, non-use, and after removal of LIFAC, and provided that LIFAC is not operated continuously for any period longer than five years. Use of the term "modification" in the subject line and text of this document does not imply anything contrary to the preceding sentence.

Response #2: Please see the response to comment #1.

Part 70 Significant Source Modification (Permit)

Comment #3: Section A.2. RPL requests that this provision be modified as follows:

Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]

Richmond Power and Light Page 3 of 14
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

[326 IAC 2-7-5(15)]

This stationary source is approved to operate the following emission units and pollution control devices:

One (1) Limestone Injection into the Furnace with downstream Activation of Calcium (LIFAC) system, installed between 1991 - 1993, to reduce sulfur dioxide (SO₂) emissions from Unit 2. Controlled boiler emissions are exhausted to the atmosphere through a 325 foot stack shared with Unit 1, with a 141 inch exit diameter. **Unit 2 may operate** whether or not the LIFAC system operates.

Response #3: The IDEM will make the following change to Section A.2. The IDEM has determined that it is not necessary to make the requested change. Given the definition of a "Pollution Control Project", listed in D.1.4, one should infer that Unit 2 may operate whether or not the LIFAC system operates.

Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to operate the following emission units and pollution control devices:

One (1) Limestone Injection into the Furnace with downstream Activation of Calcium (LIFAC) system, installed between 1991 - 1993, to reduce sulfur dioxide (SO2) emissions from Unit 2. Controlled boiler emissions are exhausted to the atmosphere through a 325 foot stack shared with Unit 1, with a 141 inch exit diameter. **The LIFAC is considered a "Pollution Control Project"**.

Comment #4: Section B.1 RPL suggests that the revision below would be appropriate.

Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11. 326 IAC 1-2 and 326 IAC 2-7 shall prevail. <u>Use of the term "modification" in this document does not mean or imply that use or cessation of use of the LIFAC system constitutes a modification under 326 IAC 2-2, 40 CFR 52.21, 326 IAC 12-1, or 40 CFR Part 60.</u>

Response #4: Please see the response to comment #1.

Comment #5: There is no paragraph B.3.

Response #5: The IDEM will make the necessary changes to correct this mistake. As a result, B.3 will be "Significant Source Modification".

Comment #6: Section B.4 RPL respectfully requests that this section be changed as indicated below.

B.4B.3 Significant Source Modification [326 IAC 2-7-10.5(h)] This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

Richmond Power and Light Page 4 of 14
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

(b) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

- (c) The requirements in this Section B apply to restart of the LIFAC system.

 Units 1 and 2 may continue to operate without regard to Section B or use LIFAC.
- **Response #6:** The IDEM will make the following change to Section B.4 as a result of the above comment:
 - B.3 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate **the LIFAC** pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (b) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emissions units were constructed LIFAC system was constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval LIFAC may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- **Comment #7:** Section C.4. The opacity provisions added to the current operating permit in 1990 relating to startup and shutdown of Unit 2 should be included in this section. These are attached as Exhibit A.
- **Response #7:** The opacity provisions set forth in Operation Permit No. 89-09-94-0206 are current. As a result of this comment IDEM is adding D.1.2. These Alternative Opacity Provisions are only for Start up and Shut down of the unit, therefore if use of the LIFAC contributes to opacity then it should not be operated during start up or shut down of the unit.

D.1.2 Opacity Exemption [326 IAC 5-1-3]

The opacity provisions set forth in OP#89-09-02-06 are incorporated by reference into this Source Modification. If the use of the LIFAC contributes to opacity then it should not be operated during start up or shut down of the unit.

Comment #8: Section C.10(a)(5). The rules at 326 IAC 2-7-5 and -6 do not authorize IDEM to impose a Compliance Response Plan, and accordingly, Section C.10(a)(5) should be deleted from the document.

(a) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and comprised of:

The Source Modification is allowing the source to operate the LIFAC system and exempting the source from undergoing PSD review and NSPS. This modification does not exempt the source from the requirements of Title V. Therefore, section C.10(a)(5) will not be deleted.

Comment #9: Section C.13(a) and (b). General Reporting Requirements. These provisions call for Quarterly Deviation and Monitoring Reports. There are no requirements imposed upon operation of the LIFAC system that RPL could deviate from and so subsections (a) and (b) of Section C.13 should be deleted from the document.

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34):

The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Response #9: The IDEM disagrees that there are no requirements imposed upon operation of the LIFAC just because it is a PCP and exempted from PSD and NSPS. Unit 2 must still comply with Title V requirements. IDEM has decided it is not appropriate to delete

(a)

Richmond Power and Light Page 6 of 14
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

subsections (a) and (b) of Section C.13 from the Source Modification.

Comment #10: Section D.1.1. Boiler Limitations. This provision should be amended as follows:

The <u>intermittent</u> operation or <u>non-operation</u> of the limestone injection system (<u>LIFAC</u>) will not change the limits specified in OP 89-09-94-0205, <u>as amended</u>, for boiler #2 <u>or require additional permitting.</u>

Response #10: The IDEM will make the following change to Section D.1.1 of the S.M.:

The **intermittent** operation or **non-operation** of the limestone injection system (<u>LIFAC</u>) will not change the limits specified in OP 89-09-94-02056 for boiler Unit #2, or those set forth in the Title V Operating Permit upon issuance.

Comment #11: Section D.1.2. Pollution Control Project Exclusion. This Provision should be amended as follows:

Pursuant to 326 IAC 2-1.1-1(13), 2-2-1(JJ), 2-2-1(v)(2)(I); 40 CFR §§ 52.21(b)(2)(iii)(h) and (I), 52.21(b)(36), and 60.14(e)(5) and (k), LIFAC is both a pollution control project and a temporary clean coal technology project. Consequently, startup, shutdown, operation, non-operation, or removal of LIFAC shall not constitute a modification of White water Valley Station or Unit 2 thereof so long as such intermittent operation or cessation of operation or removal will not result in violation of any requirement of the state implementation plan or any requirement necessary to attain and maintain any national ambient air quality standard. the operation of the LIFAC is considered a pollution control project, thus is exempted from PSD.

Response #11: The IDEM will make the following change to Section D.1.4, based on the above recommendation. Please see the response to comment #1 for an explanation of why not all of the requested changes will be made:

Pursuant to 326 IAC 2-1.1-1(13), the operation of the LIFAC is considered a pollution control project, thus is exempted from PSD. Consequently, startup, shutdown, operation and non-operation shall not constitute a modification of White water Valley Station or Unit 2 thereof so long as such intermittent operation or cessation of operation will not result in violation of any requirement of the state implementation plan or any requirement necessary to attain and maintain any national ambient air quality standard.

Comment #12: Section D.1.4 Reporting Requirements. This section says in part "To show compliance with D.1.2, SO₂ reductions shall be documented and reported..." This requirement is unnecessary. Whether something is a pollution control project or not turns on its purpose, as assessed in advance by the commissioner, not its results. 326 IAC 2-1.1-1(13), 2-2-1(bb). Moreover, it will be difficult or impossible to document the anticipated reductions with any precision because Units 1 and 2 both emit through a common stack and because there is no reason to believe that sulfur content of the coal burned while LIFAC is in use will be identical to the sulfur content of the coal burned in either unit when LIFAC is not in use.

RPL respectfully requests that this unnecessary requirement be deleted.

Richmond Power and Light Page 7 of 14
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

D.1.4 Reporting Requirements

To show compliance with D.1.2, SO₂ reductions shall be documented and reported. A Quarterly report using the form attached or it's equivalent shall be submitted.

Response #12: The IDEM has determined the Reporting Requirement Condition is necessary to demonstrate a reduction in SO₂ emissions. 326 IAC 2-1.1-1 (13) defines "Pollution Control Project" as "any activity or project undertaken at an existing emissions unit which, as its primary purpose, reduces regulated air pollutant emissions from such unit." The IDEM is not asking RPL to anticipate reductions, only to report the SO₂ emissions.

Furthermore, the Source is already required in Operation Permit 89-09-94-0206 to report SO₂ emission rates in lbs/MMBtu. Also, in the Title V permit the Source will be required to monitor SO₂ emission rates with a continuous emissions monitor.

Technical Support Document

The Office of Air Quality prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

- Comment #13: Page 2 of 5. Emissions Calculations. The calculations of "future actual" particulate matter emissions is inflated since the factors amount to an assumption that Unit 2 will operate flat out at maximum capacity for 8400 hours per year. This is certainly not probable and is likely impossible. It amounts to 96 percent availability with no derates of any kind. In 1998, Unit 2 was operated 7,919 hours, and its capacity factor was 74%. In 1999, the unit ran 7,878 hours and again had a 74% capacity factor. Based on past experience there is no reason to believe that PM emissions will increase appreciably as a result of LIFAC's use.
- Response #13: The IDEM used the annual average hours submitted by RPL in their 1998 and 1999 annual emission statements. RPL may submit justification why the two (2) most recent past years are not representative of the operation, at which time, IDEM will evaluate and agree or disagree. Therefore, there will not be a change to the emission calculations at this time.
- **Comment #14:** Page 2 of 5, third paragraph from bottom of page. RPL requests that this paragraph be replaced with the following:

Pursuant to 326 IAC 2-1.1-1(13), 2-2-1(bb), 2-2-1(v)(2)(l); 40 CFR §§ 52.21(b)(2)(iii)(h) and (I), 52.21(b)(36), and 60.14(e)(5) and (k), LIFAC is both a pollution control project and a temporary clean coal technology demonstration project. Consequently, startup, shutdown, operation, non-operation, or removal of LIFAC shall not constitute a modification of White water Valley Station or Unit 2 thereof so long as LIFAC does not operate continuously for more than five years and so long as such intermittent operation or cessation of operation or removal will not result in violation of any requirement of the state implementation plan or any requirements necessary to attain and maintain any national ambient air quality standard. The LIFAC system is considered a pollution control device, thus New Source Performance Standards (NSPS) requirements shall not be applicable due to no change or modification to the boiler, Unit 2. Also, since the boiler (Unit #2) pre-dates PSD and

Richmond Power and Light Page 8 of 14
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

NSPS applicability, start-up, shut-down and intermittent operation of the LIFAC system will not trigger PSD or NSPS since the pollution control device is not considered a change in operation or major modification of the boiler.

Response #14: Please see the response to comment #1.

Comment #15: Page 3 of 5, Source Status. The last paragraph of this section should be revised to read follows:

This change to an existing major stationary source may result in an increase in emissions of particulate matter or PM10 greater than PSD significance levels. However, since the LIFAC system is a pollution control device and a temporary clean coal technology demonstration project, the provisions of 326 IAC 2-2 (40 CFR § 52.21) (PSD) and 326 IAC 12-1 (40 CFR Part 60) (NSPS) will not be triggered by intermittent operation or cessation of operation of the LIFAC system. Use of the term "modification" elsewhere in this document does not mean or imply that use or non-use of the LIFAC system will constitute a modification of Unit 2 for purposes of PSD or NSPS. This existing source is a major stationary source because an attainment regulated pollutant is greater than 250 tons per year. This modification to an existing minor stationary source is greater than PSD significant levels, however, since the LIFAC system has been classified as a pollution control device, the provisions of 326 IAC 2-2-1(o)(2)(H), and 40 CFR 52.21 (PSD requirements) do not apply.

Response #15 Please see the response to comment #1.

Comment #16: Page 4 of 5. The sentence immediately below the table has no verb and the first citation is outdated. In any event, that sentence should be replaced with the following:

Pursuant to 326 IAC 2-2-1(v)(2)(H) and (I):

- (H) the addition, replacement or use of a pollution control project (LIFAC) as defined in 326 IAC 2-2-1(bb) and 326 IAC 2-1.1-1(13) at an existing source shall not constitute a physical change or change in the method of operation of the source unless the department determines that:
 - (I) such addition, replacement, or use is not environmentally beneficial; or
 - (ii) the pollution control project would result in a significant net emissions increase that will cause or contribute to a violation of any national ambient air quality standard (NAAQS) or PSD increment.
- (I) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project (LIFAC) shall not constitute a physical change or change in the method of operation of the service, provided that the project complies with:
 - (I) the state implementation plan; and
 - (ii) other requirements necessary to attain and maintain the national ambient air quality standards during the project and after the project is terminated.

However, pursuant to 326 IAC 2-2-1(o)(2)(H), the addition, replacement, or use of a pollution control project as defined in subsection (bb) and 326 IAC 2-1.1-1(13) at an existing source unless the department determines that:

Richmond Power and Light Page 9 of 14
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

(I) such addition, replacement, or use in not environmentally beneficial; or (ii) the pollution control project would result in a significant net emissions increase that will cause or contribute to a violation of any national ambient air quality standard (NAAQS) or PSD increment.

Response #16: The Office of Air Quality prefers that the Technical Support Document reflect the permit that was on Public Notice. The following changes are being documented in this addendum. Also, please see the response to comment #1 for an explanation of why not all of the changes were made.

However, pursuant to 326 IAC 2-2-1(o)(2)(H), the addition, replacement or use of a pollution control project as defined in subsection (bb) an d326 IAC 2-1.1-1(13) at an existing source unless the department determines that:

Pursuant to 326 IAC 2-2-1(x)(2)(H), the addition, replacement, or use of a pollution control project as defined in subsection (bb) and 326 IAC 2-1.1-1(13) at an existing source shall be considered as a physical change or change in the method of operation unless the department determines that:

Upon further review, the OAQ has made the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table of Contents has been modified to reflect these changes.

1. Section C.4, Opacity, has been changed. The limit stated during public notice was incorrect and has been corrected as shown below.

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Alternate Opacity Limitations), opacity shall meet the following, unless otherwise stated in this approval:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings a measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2(3) opacity from Richmond Power & Light's Coal Boiler No. 1 and Coal Boiler No. 2 shall not exceed an average of twenty-five percent (25%) in any one (1) six (6) minute averaging period, unless otherwise stated in this permit.

2. Section C.5, Fugitive Dust Emissions, has been added to the permit. It was discovered with the addition of the Limestone Storage and Handling that this condition should be added to the permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-or-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Richmond Power and Light
Richmond, Indiana
Permit Reviewer: Laura M. Groom

Page 10 of 14
Significant Source Modification No.: 177-12751-00009

3. Section C.11, Compliance Response Plan, has been updated as shown below. This clarifies the contents and implementation of the compliance response plan. The name of the condition has been changed to better reflect the contents of the condition. The language regarding the OAQ's discretion to excuse failure to perform monitoring under certain condition has been deleted. The OAQ retains this discretion to excuse minor incidents of missing data: however, it is not necessary to state criteria regarding the exercise of that discretion in the permit. In (c)(2) "administrative amendment" has been revised to "minor permit modification," because 326 IAC 2-7-11(a)(7) has been repealed. Requests that do not involve significant changes to monitoring, reporting, or record keeping requirements may now be approved as minor permit modifications.

C.11 Compliance Monitoring Response Plan - Failure to Take Response Steps Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6] [326 IAC 1-6]

- (a) The Permittee is required to **prepare** implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents in which the information is found. The elements of the compliance monitoring plan are:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP's shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, and maintained on site, and is comprised of:
 - (A)(1) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
 - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to

Richmond Power and Light Richmond, Indiana Permit Reviewer: Laura M. Groom

Page 11 of 14 Significant Source Modification No.: 177-12751-00009

include such response steps taken.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows: .Failure to take reasonable response steps may constitute a violation of the permit.
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) Upon investigation of a compliance monitoring excursion, the **The** Permittee is excused from taking not required to take any further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment **and**. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B Deviations from Permit Requirements and Conditions.
- (d)(e) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. The Permittee shall record all instances

Richmond Power and Light

Page 12 of 14

Richmond. Indiana

Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Laura M. Groom

when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

- (e)(f) Except as otherwise provided by a rule or provided specifically in Section D, All monitoring as required in Section D shall be performed at all times when the equipment emission unit is operating, except for time necessary to perform quality assurance and maintenance activities. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.
- 4. Condition C.12, Actions Related to Noncompliance Demonstrated by a Stack Test, has been changed as indicated below. Part 70 requires any application form, report, or compliance certification to be certified by the Responsible Official. IDEM, OAQ has revised C.12 to reflect this change.
- C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]
 - (a) When the results of a stack test performed in conformance with Section C Performance Testing, of this permit exceed the level specified in any condition of this
 permit, the Permittee shall take appropriate response actions. The Permittee shall
 submit a description of these response actions to IDEM, OAQ, within thirty (30) days of
 receipt of the test results. The Permittee shall take appropriate action to minimize
 excess emissions from the affected facility while the response actions are being
 implemented
 - (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
 - (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the Responsible official@as defined by 326 IAC 2-7-1(34).

- 5. Condition A.2 has been changed to add the new description listed below for limestone storage and handling.
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to operate the following emission units and pollution control

Richmond Power and Light
Richmond, Indiana
Permit Reviewer: Laura M. Groom

Page 13 of 14
Significant Source Modification No.: 177-12751-00009

devices:

(1) One (1) Limestone Injection into the Furnace with downstream Activation of Calcium (LIFAC) system, installed between 1991-1993, to reduce sulfur dioxide (SO₂) emissions from Unit 2. Controlled boiler emissions are exhausted to the atmosphere through a 325 foot stack shared with Unit 1, with a 141 inch exit diameter. Use of the LIFAC system is intermittent and voluntary.

- (2) A limestone storage and handling system, consisting of the following equipment:
 - (a) One (1) storage silo with a storage capacity of 250 tons. The method of handling is pneumatic transport. The maximum throughput is 78,840 tons per year. A bin vent filter/baghouse is used for dust control at the loading point.
 - (b) One (1) storage silo with a storage capacity of 135 tons. The method of handling is pneumatic transport. The maximum throughput is 78,840 tons per year. A bin vent filter/baghouse is used for dust control at the loading point.
- 6. Section D.1.3 has been added to the permit as shown below. This requirement is being added to require an additional test for PM during LIFAC operation

D.1.3 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

Within six (6) months after the LIFAC begins operating, a compliance stack test for PM shall be conducted utilizing Methods 5 or 17 (40 CFR 60, Appendix A), or other methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing. Testing for PM shall be conducted with LIFAC in operation and with Unit #1 off line.

- 7. Section D.2 has been added to the permit for Limestone Storage and Handling. It was discovered during review of comments that Limestone Storage and Handling information had never been submitted. After the appropriate information was received from the Source the D.2 section was drafted and added. Please see Section D.2.2 of the Significant Source Modification for all of the conditions included.
- 8. The modeling results determined that the use of the LIFAC will not contribute to a violation of the NAAQS. An appendix has been added to the TSD, which includes these results and a copy of the '2000' Wayne county PM₁₀ 24 hour background concentration.

The NAAQS for Wayne County is 150 Fg/m³.

The PM_{10} 24 hour background concentration in '2000' for Wayne county was 24 Fg/m³. The PM_{10} modeling result for Unit #2 while using the LIFAC was 5.49 Fg/m³.* The 5.49 Fg/m³ was calculated by taking the maximum concentration (13.73 Fg/m³) derived from the modeling program and multiplying by the 24 hour factor (0.40). The 24 Fg/m³ and 5.49 Fg/m³ were added to get 29.49 Fg/m³, which is well below the 150 Fg/m³ NAAQS.

Richmond Power and Light Richmond, Indiana Permit Reviewer: Laura M. Groom Page 14 of 14 Significant Source Modification No.: 177-12751-00009

* The modeling for the LIFAC was done using an additional 300 tons/year as the emission rate. This number was derived by taking the future actual emission rate for PM and doubling it. Please see page two (2) of the TSD to see how the future actuals were calculated.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name: Richmond Power and Light

Source Location: 2000 U.S. 27 South, Richmond, Indiana 47374

County: Wayne SIC Code: 4911

Operation Permit No.: T177-6753-00009
Operation Permit Issuance Date: not issued yet
Significant Source Modification No.: 177-12751-00009
Permit Reviewer: Sherry Harris

The Office of Air Quality (OAQ) has reviewed a modification application from Richmond Power and Light relating to the operation of the following pollution control device:

One (1) Limestone Injection into the Furnace with downstream Activation of Calcium (LIFAC) system, installed between 1991-1993, to reduce sulfur dioxide (SO_2) emissions from Unit 2. Controlled boiler emissions are exhausted to the atmosphere through a 325 foot stack shared with Unit 1, with a 141 inch exit diameter. Unit 2 may operate whether or not the LIFAC system operates.

History

On September 27, 2000, Richmond Power and Light submitted an application to the OAQ requesting to operate the LIFAC system for Unit 2. At the time of this review, Richmond Power and Light had not been issued a Title V Operating Permit.

The source has requested to operate a pollution control device, identified as Limestone Injection into the Furnace with downstream Activation of Calcium (LIFAC) to decrease sulfur dioxide (SO2) emissions from one of the boilers, identified as Unit 2 by injecting a calcium-based sorbent (limestone) into the furnace, which has been calculated as resulting in an increase in particulate matter (PM) and particulate matter less than ten (10) microns (PM10).

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (inches)	Flow Rate (acfm)	Temperature (°F)
CS001	Units 1 and 2	325	141	*	*

^{*} Information not provided

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and

Richmond Power and Light Page 2 of 5
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Sherry Harris

additional information submitted by the applicant.

An application for the purposes of this review was received on September 27, 2000.

- [(1998 emissions + 1999 emissions)/2]

- [(121.08 tons + 104.58 tons) / 2]

= 145.89 tons per year

Emission Calculations

Future Actuals

(PM emissions based on actual hours of operation)

- Past Actuals

- (average of past two years emissions)

[(avg. stack test)(max. cap.)(act. hrs)(ton/2000lbs)]

[(0.1 lb/MMBtu)(616mmBtu/hr)(8400hrs)(ton/2000lbs)] - [(121.06 258.72 - 112.83

1998 actual PM emissions = 121.08 tons 1998 actual hours = 8400 1999 actual PM emissions = 104.58 1999 actual hours = 8400

September 23, 1993 LIFAC test run = 0.072 lb/MMBtu September 24, 1993 LIFAC test run = 0.128 lb/MMBtu =average stack test = 0.10 lb/MMBtu

maximum capacity of boiler = 616 MMBtu/hr

Pursuant to stack test data, the calculations utilized the rule based on the 1992 WEPCO ruling that allows for actual to future actual calculations for utility sources to determine emissions increases. The demand increase was not considered in the calculation because the PM emissions from the control itself is already above PSD significant level and the system is exempt under Pollution Control Project. The calculations show an increase of 145.89 tons per year in PM, which is greater than significant thresholds. The PM/PM10 increase is only expected from the limestone injection. Based on these emissions, the LIFAC system has been determined a significant source modification pursuant to the following:

326 IAC 2-7-10.5(f)(4)

Modifications for which the potential to emit is greater than twenty-five (25) tons per year of particulate matter (PM) and particulate matter less than ten microns (PM10).

Prevention of Significant Deterioration (PSD) Requirements, pursuant to 326 IAC 2-2 are not applicable based on the determination that the LIFAC system qualifies as a pollution control project, defined as:

326 IAC 2-1.1-1(13) Pollution Control Project

"Pollution Control project" means any activity or project undertaken at an existing emissions unit, which, as its primary purpose, reduces regulated air pollutant emissions from such unit.

The LIFAC system is considered a pollution control device, thus New Source Performance Standards (NSPS) requirements shall not be applicable due to no change or modification to the boiler. Unit 2. Also, since the boiler (Unit #2) pre-dates PSD and NSPS applicability, start-up, shut-down and intermittent operation of the LIFAC system will not trigger PSD or NSPS since the pollution control device is not considered a change in operation or major modification of the boiler.

The purpose of that limestone injection system was to demonstrate the feasibility and effectiveness of new technologies applied to existing coal-fired power plants to reduce emissions of sulfur dioxide (SO_2). The process involves the injection of limestone into the furnace to decrease emissions of SO_2 , which was proven to significantly decrease SO_2 emission and have no substantial impact on other emissions. SO_2 emissions are expected to reduce by 75-85% due to this process.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4), based on emissions of particulate matter (PM) and particulate matter less than ten microns (PM10) greater than twenty-five (25) tons per year.

County Attainment Status

The source is located in Wayne County.

Pollutant	Status	
PM10	attainment	
SO2	attainment	
NO2	attainment	
Ozone	attainment	
CO attainment		
Lead	attainment	

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Wayne County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Wayne County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)	
PM	>250	
PM-10	>250	
SO ₂	>250	
VOC	>250	
СО	<100	
NOx	>250	

This existing source is a major stationary source because an attainment regulated pollutant is greater than 250 tons per year. This modification to an existing minor stationary source is greater than PSD significant levels, however, since the LIFAC system has been classified as a pollution control device, the provisions of 326 IAC 2-2-1, (o)(2)(H), and 40 CFR 52.21 (PSD requirements) do not apply.

Richmond Power and Light Page 4 of 5
Richmond, Indiana Significant Source Modification No.: 177-12751-00009

Permit Reviewer: Sherry Harris

Limited Potential to Emit of Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

Process/Facility	Limited Potential to Emit (tons/year)		
LIFAC	PM	PM ₁₀	SO ₂
Future Act. – Past Act.	145.89	232.91	*
PSD threshold	25.0	15.0	40.0

^{*}The source indicates that SO₂ emission will decrease by 75-85%.

However, pursuant to 326 IAC 2-2-1(v)(2)(H), the addition, replacement, or use of a pollution Control project as defined in subsection (bb) and 326 IAC 2-1.1-1(13) at an existing source unless the department determines that:

- (i) such addition, replacement, or use is not environmentally beneficial; or
- (ii) the pollution control project would result in a significant net emissions increase that will cause or contribute to a violation of any national ambient air quality standard (NAAQS) or PSD increment.

A pollution control project that is exempt under this clause shall be considered a significant source Modification under 316 IAC 2-7-10.5(f)(8).

Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12) (40 CFR 60) applicable to this pollution control device based on the definition found in 326 IAC 2-1.1-1(13) and no modification to the boiler.
- (b) There are no National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 63) applicable to this pollution control device.

State Rule Applicability

There are no emission limitations or standards applicable to this pollution control project. Prevention of Significant Deterioration (PSD) Requirements, pursuant to 326 IAC 2-2 are not applicable based on the definition of a pollution control project.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source-s failure to take the appropriate corrective actions within a specific time

Richmond Power and Light Richmond, Indiana Permit Reviewer: Sherry Harris period. Page 5 of 5 Significant Source Modification No.: 177-12751-00009

The compliance monitoring requirements applicable to this modification are as follows:

- (A) The LIFAC system has applicable compliance monitoring conditions as specified below:
 - (1) Continuous Emissions Monitoring
 Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), a continuous
 monitoring system shall be calibrated, maintained, and operated for measuring
 SO₂ during operation of the LIFAC system. Operation of the CEMs meets the
 performance specifications of 326 IAC 3-5-2.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 177-12751-00009.